UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/809,535	03/15/2001	Hubert Reinisch	4965-000115	4505

			EXAMINER
27572	7590	07/01/2005	PHAM, THOMAS K

HARNESS, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

ART UNIT	PAPER NUMBER
2121	

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/809,535	REINISCH ET AL.
	Examiner	Art Unit	
	Thomas K. Pham	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

Response to Amendment

1.   This action is in response to request for continued examination filed on 05/18/2005.

2.   Claims 1-24 are presented for examination.

Quotations of U.S. Code Title 35

3.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim Rejections - 35 USC § 102

7.   Claims 1-11, 15, 17 and 19-24 are rejected under 35 U.S.C. 102(b) as being anticipated

by U.S. Patent no. 5,479,618 ("Van de Steeg").

Regarding claim 1

Van de Steeg teaches process module (FIG. 1, "Module 15") for installation in a processing

station (FIG. 1, "Process 22") for performing a predetermined function, comprising a controller

associated with a program control unit (FIG. 2, "processor 24") into which a program (FIG. 3,

"RAM 44") for controlling the process module is supplied (see col. 5 lines 1-3, "This RAM 44 is

used for ... user motion control program"), characterized in that

-      the controller includes a program data administrator unit (FIG. 1, "PC system processor

       11") which contains data indicating the location of the program ("RAM 44") and data

       indicating the location of the program control unit ("Processor 24") for executing the

       program (see col. 2 lines 62-64, "The PC processor 11 ... a machine or process 22") and

       which co-ordinates the transfer of the program associated with the process module from a

       program data memory ("RAM 44") into the program control unit ("Processor 24") in

       accordance with the data contained in the program data administrator unit (col. 4 line 66

       to col. 5 line 1, "The processor 24 also connects ... program RAM 44") so that the

       process module and/or the processing station is/are automatically programmed when the

       process module is installed in the processing station (col. 3 lines 4-14, "The I/O module

       15 is ... an encoder device 21, respectively").

It should be noted that from FIG. 2, the PC system processor 11 (program data administrator

unit), as a whole, exchanges I/O data with Module 15 for controlling the process 22. Examiner

interprets that PC system processor 11 is sending all the information/data needed to Module 15

indicating all the locations including location of the program (RAM 44) and location of the

program control unit (processor 24) for executing the program to control process 22.

Regarding claim 8

Van de Steeg teaches process station (FIG. 1, "Process 22") with at least one process module

(FIG. 1, "Module 15") for performing a predetermined function, where the process module

comprises a controller associated with a program control unit (FIG. 2, "processor 24") into which

a program (FIG. 3, "RAM 44") for controlling the process module is supplied (see col. 5 lines 1-

3, "This RAM 44 is used for ... user motion control program") and with a bus system for

transferring data to the controller of the process module (FIG. 1 "chassis backplane 13",

characterized in that

- the controller includes a program data administrator unit (FIG. 1, "PC system processor

  11") which contains data indicating the location of the program ("RAM 44") and data

  indicating the location of the program control unit ("Processor 24") for executing the

  program (see col. 2 lines 62-64, "The PC processor 11 ... a machine or process 22") and

  which co-ordinates the transfer of the program associated with the process module from a

  program data memory ("RAM 44") into the program control unit ("Processor 24") in

  accordance with the data contained in the program data administrator unit (col. 4 line 66

  to col. 5 line 1, "The processor 24 also connects ... program RAM 44") so that the

  process module and/or the processing station is/are automatically programmed when the

  process module is installed in the processing station (col. 3 lines 4-14, "The I/O module

  15 is ... an encoder device 21, respectively").

It should be noted that from FIG. 2, the PC system processor 11 (program data administrator unit), as a whole, exchanges I/O data with Module 15 for controlling the process 22. Examiner interprets that PC system processor 11 is sending all the information/data needed to Module 15 indicating all the locations including location of the program (RAM 44) and location of the program control unit (processor 24) for executing the program to control process 22.

Regarding claim 19

Van de Steeg teaches process module (FIG. 1, "Module 15") for a processing station (FIG. 1, "process 22") for performing a predetermined function, comprising .

- a controller associated with a program control unit (FIG. 2, "Processor 24") to which a program (FIG. 3, "RAM 44") for controlling the process module is supplied (see col. 5 lines 1-3, "This RAM 44 is used for ... user motion control program"),

- wherein the controller includes a program data administrator unit (FIG. 2, "PC system processor 11") which contains data indicating the location of the program ("RAM 44") and data indicating the location of the program control unit ("Processor 24") for executing the program (see col. 2 lines 62-64, "The PC processor 11 ... a machine or process 22") and

- which coordinates the transfer of the program associated with the process module from a program data memory ("RAM 44") into the program control unit (col. 4 line 66 to col. 5 line 1, "The processor 24 also connects ... program RAM 44").

It should be noted that from FIG. 2, the PC system processor 11 (program data administrator unit), as a whole, exchanges I/O data with Module 15 for controlling the process 22. Examiner interprets that PC system processor 11 is sending all the information/data needed to Module 15

indicating all the locations including location of the program (RAM 44) and location of the

program control unit (processor 24) for executing the program to control process 22.

Regarding claim 21

- Van de Steeg teaches a processing station (FIG. 1, "process 22") with at least one process module (FIG. 1, "Module 15") for performing a predetermined function and a basic controller (FIG. 1, "PC system processor 11") coupled with said at least one process module, the process module comprising a controller (FIG. 2, "Processor 24") associated with a program control unit (FIG. 2, "Process 24") to which a program for controlling the process module is supplied (see col. 5 lines 1-3, "This RAM 44 is used for ... user motion control program"),

- Wherein the controller includes a program data administrator unit ("PC system processor 11") which contains data indicating the location of the program ("RAM 44") and data indicating the location of the program control unit ("Processor 24") for executing the program (see col. 2 lines 62-64, "The PC processor 11 ... a machine or process 22") and

- which coordinates the transfer of said process control program from a program data memory into the program control unit (col. 4 line 66 to col. 5 line 1, "The processor 24 also connects ... program RAM 44").

It should be noted that from FIG. 2, the PC system processor 11 (program data administrator unit), as a whole, exchanges I/O data with Module 15 for controlling the process 22. Examiner interprets that PC system processor 11 is sending all the information/data needed to Module 15 indicating all the locations including location of the program (RAM 44) and location of the program control unit (processor 24) for executing the program to control process 22.

Regarding claim 23

Van de Steeg teaches a processing station (FIG. 1, "process 22") comprising

- one or more process module (FIG. 1 "Module 15") for controlling one or more predetermined process functions in a manufacturing operation (see col. 2 lines 43-45, "The invention is incorporate ... process 22"), said processing station including a basis controller (FIG. 1, "PC system processor 11") for controlling the operation of said one or more process modules (FIG. 1, "Module 15"), and

- wherein each of said process modules comprises a process controller (FIG. 2, "Processor 24") for controlling the performance of one of said predetermined process functions in accordance with a process control program (see col. 5 lines 1-3, "This RAM 44 is used for ... user motion control program"),

- said process controller including a program data administrator unit ("PC system processor 11") which contains data indicating the location of the program ("RAM 44") and data indicating the location of the program control unit ("Processor 24") for executing the program (see col. 2 lines 62-64, "The PC processor 11 ... a machine or process 22") and

- which coordinates the transfer of said process control program from a program data memory into the said basis controller and/or said process controller (col. 4 line 66 to col. 5 line 1, "The processor 24 also connects ... program RAM 44") in accordance with the processing station is/are automatically programmed when said process module is installed in said processing station (col. 3 lines 4-14, "The I/O module 15 is ... an encoder device 21, respectively").

It should be noted that from FIG. 2, the PC system processor 11 (program data administrator unit), as a whole, exchanges I/O data with Module 15 for controlling the process 22. Examiner interprets that PC system processor 11 is sending all the information/data needed to Module 15 indicating all the locations including location of the program (RAM 44) and location of the program control unit (processor 24) for executing the program to control process 22.

Regarding claim 24

Van de Steeg teaches process module (FIG. 1, "Module 15") for installation in a processing station (FIG. 1, "process 22") comprising

- one or more process module (FIG. 1 "Module 15") for controlling one or more predetermined process functions in a manufacturing operation (see col. 2 lines 43-45, "The invention is incorporate ... process 22"), said processing station including a basis controller (FIG. 1, "PC system processor 11") for controlling the operation of said one or more process modules (FIG. 1, "Module 15"), and

- wherein each of said process modules comprises a process controller (FIG. 2, "Processor 24") for controlling the performance of one of said predetermined process functions in accordance with a process control program (see col. 5 lines 1-3, "This RAM 44 is used for ... user motion control program"),

- said process controller including a program data administrator unit ("PC system processor 11") which contains data indicating the location of the program ("RAM 44") and data indicating the location of the program control unit ("Processor 24") for executing the program (see col. 2 lines 62-64, "The PC processor 11 ... a machine or process 22") and

- which coordinates the transfer of said process control program from a program data memory into the said basis controller and/or said process controller (col. 4 line 66 to col. 5 line 1, "The processor 24 also connects ... program RAM 44") in accordance with the processing station is/are automatically programmed when said process module is installed in said processing station (col. 3 lines 4-14, "The I/O module 15 is ... an encoder device 21, respectively").

It should be noted that from FIG. 2, the PC system processor 11 (program data administrator unit), as a whole, exchanges I/O data with Module 15 for controlling the process 22. Examiner interprets that PC system processor 11 is sending all the information/data needed to Module 15 indicating all the locations including location of the program (RAM 44) and location of the program control unit (processor 24) for executing the program to control process 22.

Regarding claim 2

Van de Steeg teaches the controller comprises the program data memory (FIG. 3 "RAM 44").

Regarding claims 3, 4 and 10

Van de Steeg teaches the controller comprises the program control unit (FIG. 2 "processor 24").

Regarding claims 5 and 11

Van de Steeg teaches the program control unit is provided as a microprocessor. (FIG. 2, "microprocessor 24").

Regarding claim 6

Van de Steeg teaches program data administrator unit comprises a memory unit for storing data specific to the process module (FIG. 3, "RAM 44").

Regarding claim 7

Van de Steeg teaches the program data administrator unit can be connected through a bus to the program data memory (FIG. 1, bus 13 is connecting PC system processor 11 and Module 15).

Regarding claim 9

Van de Steeg teaches a basis controller is provided (FIG. 1, "PC system processor 11") and wherein the process module comprises an interface for connection to the basis controller (FIG. 1, PC system processor 11 interfaces with Module 15).

Regarding claim 15

Van de Steeg teaches the basis controller and/or the controller are configured to establish a connection with the program data memory, which lies outside of the processing station (FIG. 1, showed the PC system 11 is connecting with Module 15 which includes RAM 44, which lies outside the process 22).

Regarding claim 17

Van de Steeg teaches after connection of a process module to the processing station via the interface, the program for controlling the process module is read out of the program data memory depending on the data specific to the process module stored in the program data administrator unit and is transferred to the program control unit (col. 3 lines 30-48, "the I/O module 15 has ... as a second byte stream").

Regarding claims 20 and 22

Van de Steeg teaches the controller further includes said program data memory (FIG. 3 "RAM 44").

Claim Rejections - 35 USC § 103

8.   Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van de Steeg in view of U.S. Patent 4,972,365 ("Dodds").

Regarding claim 12

Van de Steeg does not teach several process modules are provided and wherein the programs associated with the process modules are supplied to the program control unit.

However, Dodds teaches several process modules are provided connected via a backplane (FIG. 1, multiple modules 14 and 15) and wherein the programs associated with the process modules are supplied to the program control unit (col. 4 lines 15-22, "The processor unit 10 executes ... in the user control program") for the purpose of establishing communication between the multiple modules when connected in the same backplane (see col. 4 lines 48-54).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the multiple modules of Dodds with the system of Van de Steeg because it would provide for the purpose of establishing communication between the multiple modules when connected in the same backplane.

Regarding claim 13

Dodds teaches the program control unit comprises several microprocessors, so that the programs associated with the process modules are supplied to run in parallel on the different microprocessors (FIG. 2 show that each of the I/O logic modules 14 and 15 has its own program processor 29).

Regarding claim 14

Dodds teaches at least one of the microprocessors is provided in a controller of the process module (FIG. 2).

9.   Claims 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van de Steeg in view of in view of U.S. Patent no. 6,038,486 ("Saitoh").

Regarding claim 16

Van de Steeg does not teach the connection to the program data memory takes place over the Internet, and wherein the program data memory is provided in a server connected to the Internet.

However, Saitoh teaches the connection to the program data memory takes place over the Internet, and wherein the program data memory is provided in a server connected to the Internet (col. 2 lines 51-56, "the FA server system ... arbitrary personal computer 10") for the purpose of transferring program files at any remote location (see col. 1 lines 35-38).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the Internet communication of Saitoh with the system of Van de Steeg because it would provide for the purpose of transferring program files at any remote location.

Regarding claim 18

Saitoh teaches the data specific to the process module comprise at least one of the following data: storage location of the program, target location for the transfer of the program and identification data of the process module (col. 3 lines 57-65, "FA server 4 retains ... executed at this time").

Response to Arguments

In the remark the applicants argue that the cited reference fails to disclose:

I)   "a controller having a program data administrator unit that contains data indicating the location of the program control unit that executes the process control program for controlling the operation of the process module" as to claims 1, 8, 19, 21, 23 and 24.

In response to applicants' arguments,

I)   It should be noted that from FIG. 2, the PC system processor 11 (program data administrator unit), as a whole, exchanges I/O data with Module 15 for controlling the process 22. Examiner interprets that PC system processor 11 is sending all the information/data needed to Module 15 indicating all the locations including location of the program (RAM 44) and location of the program control unit (processor 24) for executing the program to control process 22.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thomas Pham*; whose telephone number is (571) 272-3689, Monday - Thursday from 6:30 AM - 5:00 PM EST or contact Supervisor *Mr. Anthony Knight* at (571) 272-3687.

Any response to this office action should be mailed to: **Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450.** Responses may also be faxed to the **official fax number (703) 872- 9306.**

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thomas Pham
Patent Examiner

June 27, 2005